

ABSTRACT OF THE DISCLOSURE

A method of making amide polymers with improved back-bone rigidity, stability and/or planarity through the promotion of intra-molecular interactions is disclosed. Amide polymers, in accordance with the embodiments of the invention, are formed using aromatic dicarboxylic acids and heterocyclic diamine precursors or reactive amino-acid heterocyclic precursors. The heterocyclic precursors used in the present invention have heterocyclic structures that include hetero-atoms in a position that is beta relative to one or more reactive amine groups. Preferably, the hetero-atoms are nitrogen atoms. In accordance with further embodiments, precursors include functional groups that promote inter-molecular interactions, intra-molecular interactions and/or enhance solubility of the amide polymers formed.